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Costs and Benefits of a Monetary Union

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I. INTRODUCTION

Do we increase our welfare as a nation when we abolish our national currency and take over some currency of a wider area ? Would it be good for Belgian, French, Italian, German citizens, when the BF, FF, the lira, the mark would disappear and some common European currency would take over ?

Today we tend to answer these questions almost instinctively with a resounding yes. Every move towards more union in Europe is a good thing. The answer to these questions, however, is not obvious. There are benefits and costs to a monetary union.

In this inaugural lecture I want to analyze these costs and benefits. I will concentrate the attention on the *economic* costs and benefits, exclusively. Surely there is also much to be said about the *political* costs and benefits. And maybe these will turn out to be much more important in the decision to move towards a monetary union in Europe. My expertise, however, about these political issues is limited. I will therefore not deal with the political aspects of the problem.

The question of whether we will gain by relinquishing our national currency leads immediately to a new question. Suppose we say, yes, it would be good economics to eliminate national currencies, where do we stop then ? Should we have one money for the Benelux, or for the EC, or for the whole of Europe, or maybe for the whole world ?

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In order to tackle all these problems we have to analyze systematically what the costs and benefits are of having one currency. I will start with the costs. I will then move to the benefits. Finally I will attempt to evaluate these costs and benefits, in the hope to formulate some conclusions that are helpful in answering the questions I just formulated.

II. THE COSTS OF A COMMON CURRENCY

The costs of a monetary union derive from the fact that when a country relinquishes its national currency, it also relinquishes an instrument of economic policy. A nation joining a monetary union will not be able anymore to change the price of its currency (by devaluations and revaluations).

One may raise the issue here of what good it does for a nation to be able to devalue or revalue its currency. There are many situations in which the use of the exchange rate instrument can be very useful for an individual nation. This is so because nations are different, in some important senses, requiring changes in the exchange rate to occur. Let us analyze some of these differences that may require exchange rate adjustments.

A. *Shifts in Demand*

Consider the case of a demand shift developed by Mundell in his celebrated article on optimum currency areas[1]. Let us suppose that for some reason EC-consumers shift their preferences away from French-made to German-made products. The result of such a shift is that output declines in France and that it increases in Germany. This is most likely to lead to additional unemployment in France and a decline of unemployment in Germany. In addition, France is likely to have a current account deficit and Germany a current account surplus as a result of this shift in demand.

Both countries will have an adjustment problem. France is plagued with unemployment and a current account deficit. Germany experiences a boom which also leads to upward pressures on its price level, and it accumulates current account surpluses. The question that arises is whether there is a mechanism that leads to automatic equilibration, without the countries having to resort to devaluations and revaluations ?

The answer is positive. Theoretically, there are two mechanisms that can automatically bring back equilibrium in the two countries. One is based on wage and price flexibility, the other on the mobility of labour.

1. Wage and price flexibility

If wages in France and Germany are flexible the following will happen. French workers who are unemployed will reduce their wage claims. In Germany the excess demand for labour will push up the wage rate. This has the effect of making the French products more competitive again, so that France is able to export more. The opposite happens in Germany where the wage push makes German products more expensive, and thereby leads to a reduction in its demand.

2. Mobility of labour

A second mechanism that will lead to a new equilibrium involves mobility of labour. The French unemployed workers move to Germany where there is excess demand for labour. This movement of labour eliminates the need to let wages decline in France and increase in Germany. Thus, the French unemployment problem disappears, whereas the inflationary wage pressures in Germany vanish. At the same time the current account disequilibria will also decline. The reason is that the French unemployed were spending on goods and services before without producing anything. This problem tends to disappear with the emigration of the French workers to Germany.

Thus, in principle the macroeconomic disequilibrium which was the result of the demand shift in France and Germany will disappear automatically if wages and prices are flexible, and/or if the mobility of labour between the two countries is sufficiently high. If these conditions are not satisfied, however, the problem will not vanish. Suppose for example that wages in France do not decline despite the unemployment situation, and that French workers do not move to Germany. In that case France is stuck in a very uncomfortable situation of unemployment and current account deficit, whereas Germany continues to accumulate current account surpluses.

The French authorities will now have a strong incentive to devalue the FF. The effect of such an exchange rate adjustment is to improve the competitiveness of French products in Germany, so that the French can sell more of their products. In Germany, the opposite oc-

curs. The revaluation of the mark reduces German exports and thereby reduces the inflationary pressures.

The effects of this exchange rate change is that France solves its unemployment problem, and that Germany avoids having to accept inflationary pressures. At the same time, the current account deficit of France and surplus of Germany tend to disappear. A remarkable feat of using just one instrument.

You may certainly feel that this is too beautiful to be true. And indeed it is. However, for the moment let me just present Mundell's theory. I will come back later with criticism.

We can certainly conclude the following: If France is hit by a negative demand shock and if it has relinquished its exchange rate instrument by joining a monetary union with Germany, it will be saddled with a sustained unemployment problem, and a current account deficit if wages are rigid and if labour is not mobile. In this sense we can say that a monetary union has a cost for France when it is faced with a negative demand shock. Similarly, Germany will find it costly to be in a monetary union with France, because it will have to accept more inflation than it would like.

Can we solve the problem in which the two countries find themselves by using other instruments than a devaluation? The answer, in principle, is yes. The German authorities could increase taxes in Germany so as to reduce aggregate demand. These tax revenues could then be transferred to France where they are spent. France would still have a current account deficit. However, it would be financed by the transfer from Germany.

It will be obvious that this solution to the problem is difficult to contemplate between sovereign nations, especially since it will have to be repeated every year if the demand shift that started the problem, is a permanent one. This solution, however, is frequently applied between regions of the same nation. Many countries have implicit or explicit regional redistribution schemes through the national budget.

B. *Nations can be Subjected to other Shocks*

Demand shifts are not the only reasons why nations may contemplate the use of the exchange rate instrument to correct for macroeconomic disequilibria. Take another example, that recently has become a real possibility again: An increase in the price of oil. Such a shock which hits all oil consuming countries in the same way, may nevertheless

have quite different consequences for these countries. There are many reasons for this. Labour markets function differently. In one country the wage indexing scheme leads to an immediate increase in wages following the increase in the price of oil, in other countries this may not happen. As a result, some countries experience more wage and price increases than others which leads to an important loss of their competitiveness. These countries may then want to use their exchange rates to correct for this differential development. If they are part of a monetary union, they will not be able to do so anymore.

It may be helpful at this stage to be a little more practical and to present a case study of how disturbances affect countries and how the exchange rate option can help a nation.

C. *A Case Study: Belgium and Michigan during the Eigthies*

During the early eighties the industrial world was hit by a severe recession. This worldwide downturn of economic activity hit regions of the world very differently. In general, regions with an older industrial structure were hit more severely. We take two examples, Michigan in the US, and Belgium in Europe. Both regions have a comparable size, and can be said to have a similar "old" industrial structure. In Figures 1 and 2 we present the evolution of the unemployment rate in these two regions and compare them with the total US and European unemployment.

We observe from these figures that unemployment increased significantly more in Michigan and Belgium than in the US and in Europe, respectively. It should also be noted that the fact that the US is much more integrated economically than Europe did not prevent large differentials in unemployment from occuring. In fact the differential development in unemployment rates appear to be even more pronounced in the US than in Europe. In the case of the US, integration has also led to a large regional concentration of the automobile sector in Michigan. This sector was severely hit by the recession of the early eighties. This also explains the intensity of the unemployment problem in Michigan during that period.

How did these two regions adjust ? The nature of the adjustment was very different in the two cases. In the case of Michigan a significant part of the adjustment was taken care of by outward migration. This is shown in Figure 3 (borrowed from Eichengreen (1990)), which compares the differential of the Michigan - US unemployment rate

with the rate of emigration from Michigan (as a percent of the Michigan population). Note that the percentages are not fully comparable because the denominators are different. In the case of the emigration figures, the denominator is total population, whereas in the case of the unemployment figures the denominator is the active population. The latter is typically less than half of total population. As a result, one percent emigration rate involves more than twice the numbers implicit in one percent unemployment rate. It follows that emigration from Michigan was a sizable fraction of the unemployed, and helped to reduce the unemployment rate of that state.

In the case of Belgium the adjustment process was mainly through real exchange rate changes. In Figure 4 we show the differential of the Belgian-EC unemployment rate together with the real exchange rate of the BF. We observe that Belgium adjusted to the unfavorable economic developments by a real depreciation of its currency of more than 25 percent. This helped to restore competitiveness, and started a process of gradual recovery leading to a significant narrowing of the unemployment differential between Belgium and the EC. At the end of the eighties this differential had completely disappeared. About half of this real depreciation came about by nominal devaluations, the other half by lower cost and price developments in Belgium, compared to its main trading partners.

It should also be noted that the real depreciations of the early eighties started to have effects on the unemployment rate in Belgium with some delay. This contrasts with the Michigan experience where the emigration reacted rather quickly to the worsening unemployment situation.

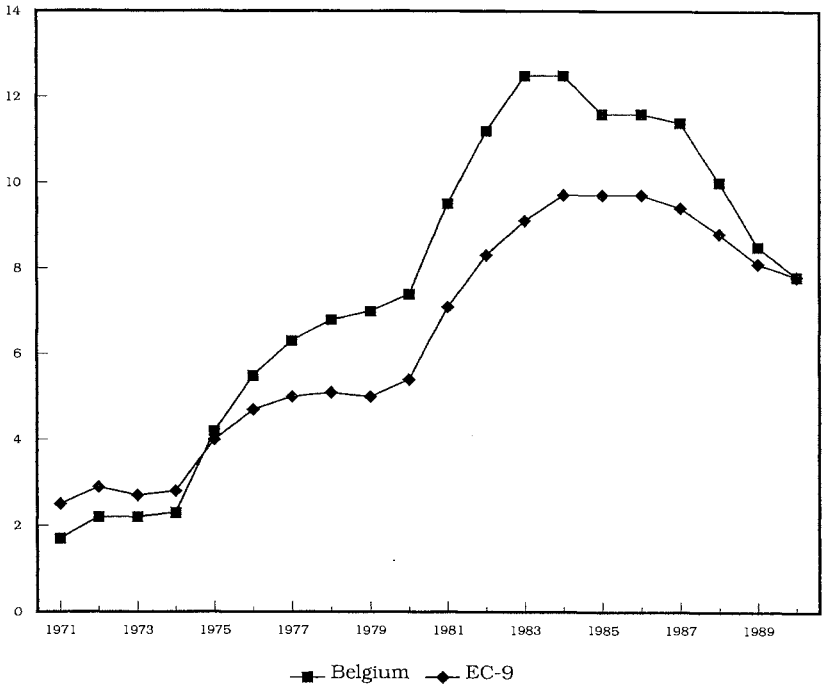
In the case of Michigan very little real depreciation took place. According to Eichengreen, regional changes in the real exchange rates in the US have been limited to a few percentage points during that period (Eichengreen (1990). Note also that these real regional exchange rates in the US can only change because of differential regional developments in prices.). In Belgium very little of the adjustment took the form of outward migration of Belgian unemployed workers. In 1984, for example, the stock of emigrated Belgian workers in the EC (i.e. the sum of the emigrations from all previous years), amounted to barely 40,000. This is 0.4% of the Belgian population[2].

There is another important difference in the adjustment mechanism in these two regions. This has to do with fiscal policies. In the case of Michigan the Federal budget tended to automatically transfer

purchasing power to Michigan. This result came about mainly through the Federal transfers for the unemployed, and through the reduction in Federal tax revenues from Michigan. It has been estimated by Sachs and Sala-i-Martin(1989) that for every decline in state income of $1

FIGURE 1

Unemployment Rate, Belgium and EC-9, 1971-90



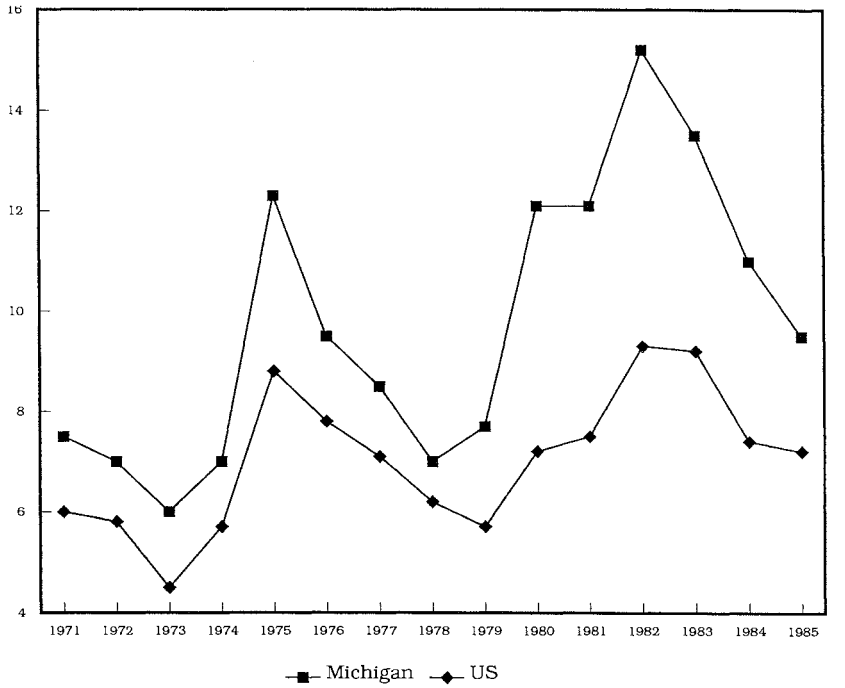
Source: EC-Commission, European Economy.

the Federal budget transfers back 40 cents to the state.

Belgium could not profit from such an intra-European redistribution. Instead, Belgium let its government budget deficit increase spectacularly and borrowed heavily in the foreign capital markets. This allowed it to soften the blow of the recession. It also implied that the interregional solidarity which was present in the US, was substituted by an intergenerational solidarity within Belgium, where future generations of Belgians will have to service the government debt.

FIGURE 2

Unemployment Rate, Michigan and US, 1971-85



Source: Eichengreen (1990).

From this analysis one could be tempted to conclude that a monetary union for a country like Belgium is going to be very costly and therefore unattractive. This would, however, be too rash a conclusion. We have not yet introduced the benefits of a monetary union. After all one can only draw conclusion after comparing costs with benefits. In addition, there is some criticism to be levied against the preceding analysis. To this criticism I now turn my attention.

D. *The Discipline Argument*

Quite often the divergent movements one observes in the competitiveness of nations, is the result of ill-conceived policies, and not of some exogenous disturbance that hits nations. Take the example of Belgium again. Some will argue that the wage and price explosion that occurred in Belgium during the second half of the seventies, was made

FIGURE 3

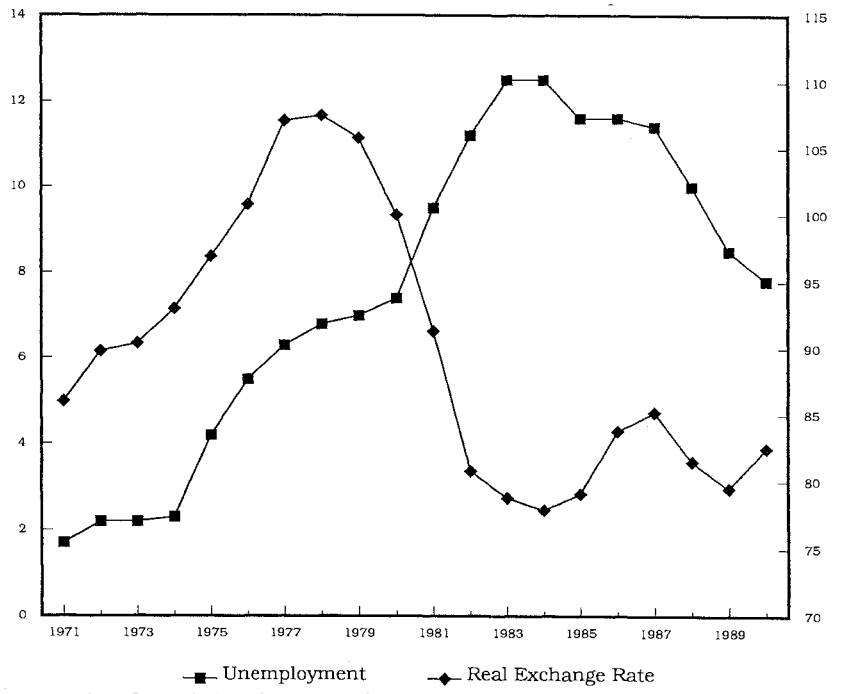
Michigan Unemployment Differential and Emigration, 1971-84

Source: Eichengreen (1990).

possible by a lack of discipline of the Belgian authorities, mainly the budgetary authorities, and the Belgian trade unions. The fact that a devaluation could be used gave an incentive to both the government and the unions to behave in an undisciplined manner. In a monetary union, authorities and unions, knowing that the exchange rate is irrevocably fixed, will show more restraint. The government is aware that the exchange rate cannot be changed anymore, so that there will be more monetary and budgetary discipline. Similarly unions know that excessive wage increases cannot later be corrected anymore by a devaluation. Thus, they will refrain from excessive wage claims because in a monetary union the loss of competitiveness and therefore of employment cannot easily be corrected. This leads to the suggestion that had Belgium been part of a monetary union in the seventies, the wage and price explosion would not have occurred.

FIGURE 4

Unemployment rate and real exchange rate, Belgium, 1971-90



Source: EC-Commission, European Economy.

This argument now has become very popular, especially in the Latin countries where the distrust against the national authorities runs very deep. In these countries a monetary union is seen as a disciplining device. It takes away the devaluation option, and therefore prevents the authorities from doing foolish things. A monetary union ties the hands of the national authorities so to speak. Many people in this country (Belgium) have the same Latin distrust and hail a monetary union as a device to discipline our national government which would do foolish things were it not for the existence of these external constraints.

There is certainly an important grain of truth in this argument. It says that if people face sufficiently high sanctions, they will behave in a disciplined way. Conversely, in a permissive society people will commit many crimes. The devaluation option creates this permissive environment which weak governments surely will abuse.

This argument, however, should not be stretched too far. There are several reasons for this. First, not all unfavorable developments in competitiveness are the result of policy mistakes due to a lack of monetary discipline. Take the case of Belgium again. Surely, a monetary union may have imposed more discipline in the system. However, it should not be forgotten that during the seventies, the Belgian National Bank tied the currency very closely to the mark, and did impose a lot of monetary discipline. This did not prevent wages from increasing too fast. To some degree this was due to the wage indexing mechanism which, more than in other countries, led to a wage price spiral following the two oil shocks of 1973-74 and 1979. This problem could certainly arise again, even if Belgium would become part of a monetary union. Thus, such institutional features as automatic wage indexing will have to go if we want to avoid problems in a future monetary union.

Second, the case of Michigan also illustrates that regions that are part of a monetary union and therefore are subject to monetary discipline, can nevertheless experience large deteriorations in their competitive position. In the case of Michigan this deterioration came about because of an unfavorable industrial structure. Also in the case of Belgium during the seventies and the early eighties, the intensity of the economic downturn was the result of old and unadapted industrial structures which had the effect that the world-wide recession hit the Belgian economy particularly severely.

Thirdly, while it is true that taking away the control over national moneys from the national authorities imposes a lot of discipline on these governments, we will have to give the authority over money to other, European, decision makers. What guarantee is there that these European policy-makers will behave in a more disciplined way than their national counterparts ? There is no reason to think that this will automatically be the case. We should shed this naive European optimism that believes that European policy-makers are inherently wiser than national authorities.

Let me conclude this part by stating that in a monetary union there will continue to be circumstances in which a devaluation or a revaluation would be a handy instrument to correct for macroeconomic disequilibria. Relinquishing one's money therefore does impose a cost on nations.

III. THE BENEFITS OF A COMMON CURRENCY

Whereas the costs of a common currency have much to do with the macroeconomic management of the economy, the benefits are mostly situated at the microeconomic level. Eliminating national currencies and moving to a common currency can be expected to lead to gains in economic efficiency. These gains in efficiency have two different origins. One is the elimination of transaction costs associated with the exchanging of national moneys. The other is the elimination of risk coming from the uncertain future movements of the exchange rates.

A. *Direct Gains from the Elimination of Transaction Costs*

Eliminating the costs of exchanging one currency into the other is certainly the most visible (and most easily quantifiable) gain from a monetary union. We have all experienced these costs whenever we exchanged one currency into another. These costs disappear when countries move to a common European currency.

How large are these gains from the elimination of transaction costs ? The EC-Commission has recently estimated these gains, and arrives at a number between 13 to 20 billion ECU per year[3]. This represents one fourth to one half percent of the Community GDP. This may seem peanuts. It is, however, a gain that has to be added to the other gains from a single market.

It should be noted here that these gains that accrue to the general public have a counterpart somewhere. They are mostly to be found in the banking sector. Surveys in different countries indicate that about 5% of the banks' revenues are the commissions paid to banks in the exchange of national currencies. This source of revenue for the banks will disappear with a monetary union.

The preceding should not give the impression that the gain for the public is offset by the loss of the banks. The transaction costs involved in exchanging money are a deadweight loss. They are like a tax paid by the consumer in exchange for which he gets nothing. Banks, however, will have a problem of transition : they will have to look for other profitable activities. When this has been done, society will have gained. The employees of the banks, previously engaged in exchanging money, will now be free to perform more useful tasks for society.

B. *Exchange Rate Uncertainty and the Price Mechanism*

The second source of benefit of a monetary union comes from the reduction of exchange risk. Exchange rate uncertainty introduces uncertainty about the future prices of goods and services. Economic agents base their decisions concerning production, investment and consumption on the information that the price system provides them. If these prices become more uncertain the quality of these decisions will decline.

We can make these general statements more concrete by considering an example. Suppose, a firm decides to invest in a foreign country. It bases this decision on many variables. One of these is the expected future exchange rate. Suppose then that after having made the investment, it turns out that the exchange rate on which the decision was made, was wrong and that this forecast error makes the whole investment unprofitable so that the firm decides to close its foreign operation. Such errors will be costly. One can also expect them to be more frequent when the uncertainty about the future exchange rate increases. In this sense, the price system, which gives signals to individuals to produce or to invest, becomes less reliable as a mechanism to allocate resources. Conversely, when the price uncertainty declines because of the introduction of a common currency, the price system will be a better guide in making the right decisions. Although these efficiency gains are difficult to quantify, they are certainly quite important.

C. *Exchange Rate Uncertainty and Economic Growth*

The argument that the elimination of the exchange risk will lead to an increase in economic growth is often made. It features prominently in the recent EC-report "One Market, One Money". The basic argument is as follows. Less exchange risk will reduce overall risk. It will therefore lead to lower real interest rates. This will in turn stimulate investment, and through this channel it will boost economic growth.

This analysis sounds plausible. There is however very little empirical evidence to back it up. We present some evidence in Table 1, which of course is not conclusive, but which suggests that the relation is rather weak. We show the growth rates of GDP and of investment in industrial countries during the eighties. We classify these countries

into two groups, those that have experienced relatively stable exchange rates (mainly the EMS countries) and those that have seen their exchange rates fluctuate a lot. In general, the latter countries have experienced exchange variability that is three to five times as large as the former.

The numbers of Table 1 are striking. The greater exchange rate stability that the EMS-countries have experienced during the eighties does not seem to have provided a great boost to the growth rates of output and investment[4]. As a matter of fact, the growth rates of output and investment have on average been lower in the EMS-countries than in the non-EMS countries in the rest of the industrialized world that experienced relatively large movements in their exchange rates.

TABLE 1

Growth of GDP and of Investment (1981-90)

	GDP	Investment
EMS-countries		
Belgium	1.9	2.0
Denmark	1.9	1.3
Germany	2.1	1.7
Ireland	2.8	0.3
France	2.1	1.8
Italy	2.5	2.0
Netherlands	1.8	2.6
Non-EMS countries		
Portugal	2.7	4.2
Spain (until 1989)	2.7	5.3
Greece	1.6	0.0
UK	2.4	3.8
USA	3.0	3.6
Japan	4.1	5.9

Source: EC- Commission, European Economy.

Another way to show this lack of a robust relationship between economic growth and exchange rate risk is to look at the growth rate of countries as a function of their size. Large countries have a large monetary zone within which there is no exchange rate uncertainty. Firms in small countries typically face much more exchange rate uncertainty because they sell a larger proportion of their final output to countries

in different monetary areas. Thus, a large part of these sales face exchange rate uncertainty. Therefore one would expect that, if there is a link between exchange rate uncertainty and economic growth, larger countries will on average experience a higher growth rate of output than small countries. We show some evidence in Figure 5. On the vertical axis we present the growth rates during 1965-87, on the horizontal axis the size of these countries as measured by their GDP (in 1987). It is immediately clear that there is no relationship between the size of countries and their growth rates.

We conclude that the existing evidence that a lower exchange rate uncertainty stimulates growth is very weak. We should not expect too much additional economic growth from a monetary union in Europe.

There are two possible explanations for our failure to find a significant empirical relationship between exchange rate uncertainty and economic growth.

A first explanation is that when we compare the experience of the EMS-countries with the other countries, we failed to take into account the fact that the exchange rate uncertainty within the EMS, although reduced, has not been eliminated. It may be that the movement to full monetary union with a common currency is the step we need to eliminate the exchange rate uncertainty, and to stimulate economic growth. (Note however that this interpretation of the empirical results is less convincing when we look at the evidence concerning the size of countries).

A second more promising explanation is that the reduction in exchange rate uncertainty may not necessarily reduce the systemic risk. Less exchange rate uncertainty may be compensated by greater uncertainty elsewhere, e.g. interest rate uncertainty. As a result, firms that face a greater monetary zone may not on average operate in a less risky environment[5].

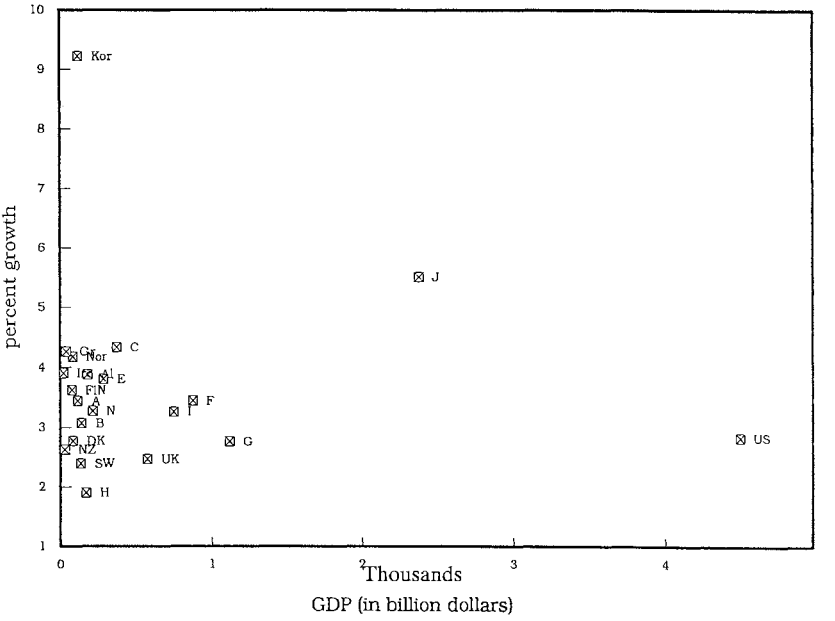
D. *Conclusion*

A monetary union has important benefits. First, a common currency in Europe will eliminate transaction costs. Second, by reducing price uncertainty, a common currency will improve the allocative efficiency of the price mechanism. This will certainly improve welfare, although it is difficult to quantify this effect.

We have also concluded that we should not expect too much additional economic growth from a monetary union. The potential

FIGURE 5

Growth rates of GDP (1965-87) and level of GDP (1987)



Source: OECD, Economic Outlook.

growth-boosting effects of a monetary union have been oversold. The theoretical reasons for a monetary union to stimulate economic growth are weak, and so is the empirical evidence. The benefits of a monetary union are to be found elsewhere than in its alleged growth-stimulating effects.

IV. COSTS AND BENEFITS COMPARED

From our previous analysis it will also be clear that costs and benefits of relinquishing one's national money are related to the size and the degree of openness of a country. In general we can formulate the following two rules:

- the more open a country is, the larger the gains it has from joining a monetary union;
- the more open a country is, the smaller the costs are from loosing control over its national money (and exchange rate).

We can represent these two rules in the following graph (Figure 6). The intersection point of the benefit and the cost lines determines the critical level of openness that makes it worthwile for a country to join a monetary union with its trading partners. To the left of that point, the country is better off keeping its national currency. To the right it is better off when it relinquishes its national money and takes over the money of its trading partners.

Figure 6 allows us to draw some qualitative conclusions concerning the importance of costs and benefits. The shape and the position of the cost schedule depends to a large extent on one's view about the effectiveness of the exchange rate instrument in correcting for the effects of different demand and cost developments between the countries involved.

At one extreme, there is a view, which will be called monetarist, claiming that exchange rate changes are ineffective as instruments to correct for these different developments between countries. And even if they are effective, the use of exchange rate policies typically makes countries worse off. In this monetarist view[6] the cost curve is very close to the origin. We represent this case in Figure 7a. In this monetarist view of the world, the critical point that makes it worthwile to form a union is close to the origin. Thus, in this view, many countries in the world would gain by relinquishing their national currencies, and by joining a monetary union.

At the other extreme, there is the Keynesian view that the world is full of rigidities (wages and prices are rigid, labour is immobile), so that the exchange rate is a powerful instrument to eliminate disequilibria. In this view, the cost curve is far away from the origin, so that relatively few countries should find it in their interest to join a monetary union. It also follows from this view that many large countries that now have one currency would be better off (economically) splitting the country in different monetary zones.

It is unmistakable that since the early eighties the monetarist view has gained adherents, and has changed the view many economists have about the desirability of a monetary union. Today the consensus seems to have evolved favoring monetary unification, certainly in Europe.

What does this analysis teach us about the issue of whether EC-countries would benefit from a monetary union ? In order to answer this question we present some data on the importance of the intra-EC trade for each EC-country. The data are in Table 2.

FIGURE 6

Costs and benefits of a monetary union

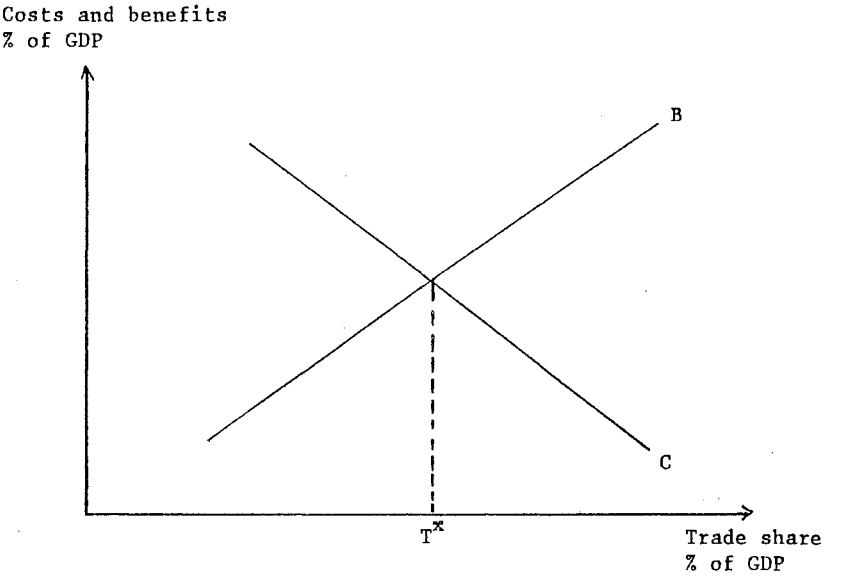


FIGURE 7

Costs and benefits of a monetary union

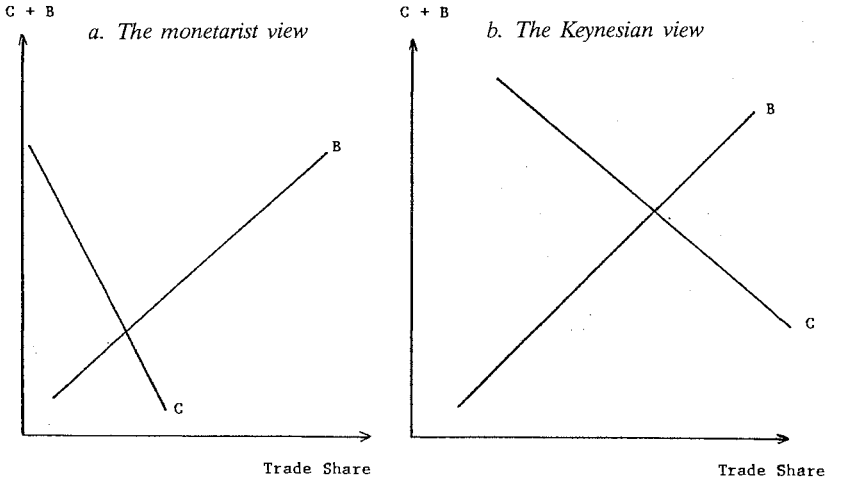


TABLE 2

Intra-Community exports of EC-countries (as % of their GDP) in 1990

Ireland	50.1
Belgium	49.8
Netherlands	40.0
Portugal	19.6
Germany	16.1
Denmark	13.9
France	12.5
Greece	11.6
United Kingdom	9.5
Italy	9.4
Spain	7.1

Source: EC-Commission, European Economy.

The most striking feature of Table 2 is the large difference in openness of EC-countries with the rest of the Community. This suggests that the cost-benefit calculus is likely to be very different for the EC-countries. For some countries with a large degree of openness relative to the other EC-partners, the cost-benefit calculus is likely to tilt towards joining a European monetary union. This will most likely be the case of the Benelux-countries and Ireland. Other countries, e.g. the UK, Italy and Spain have a relatively low openness towards the rest of the EC (in 1990). The case for joining a monetary union with the rest of Europe does not appear to be overwhelming for these countries.

Of course, if one is sufficiently monetarist, one could argue that for countries with such low degrees of openness, the benefits would still outweigh the costs, and joining a monetary union would also for these countries make sense from an economic point of view.

The analysis implicit in Figure 6 and the empirical evidence of Table 2 suggest that a two-speed Europe in the monetary integration proces could make sense. For some countries it would be sensible from an economic point of view to tie their monetary fate to others. The most obvious case would be the Benelux with Germany. Other EC-countries, however, may find it advantageous to wait and see, until the "time is ripe", i.e. until the cost-benefit calculus tilts more in favor of the benefits.

V. CONCLUSION

The arguments developed in this lecture lead me to formulate two conclusions. First, it is unlikely that the EC as a whole constitutes an optimal currency area. Put differently, not all EC-countries have the same interest in relinquishing their national currencies and in adhering to a European monetary union. The cost-benefit analysis therefore also implies that a monetary unification in Europe will better suit the economic interests of the different individual countries if it can proceed with different speeds, i.e. if some countries who today feel that it is not in their national interest to do so, have the option to wait before joining the union.

Second, even the countries that most likely would be net gainers from a monetary union, have to take into account that, faced with disturbances like the one that occurred during the early eighties, they will pay a price for relinquishing their national currencies. Belgium, for example, would, I believe, gain from joining a monetary union. We should be aware, however, that there will also be costs involved. The weakness of the Belgian industrial structure, the special features of its labour markets (including the wage indexing system), the weak budgetary situation may, as in the recent past, lead to divergent trends in competitiveness which will be more difficult to correct when we are part of a European monetary union.

The analysis I have done here has been based on an *economic* cost-benefit analysis. Countries may also decide to adopt a common currency for *political* reasons. A common currency may be the first step towards a political union, that they wish to achieve. The economic cost-benefit analysis remains useful, however, because it gives an idea of the price some countries will have to pay to achieve these political objectives.

NOTES

1. See Mundell (1961).
2. See T. Straubhaar, International Labour Migration within a Common Market: Some Aspects of the EC Experience, Journal of Common Market Studies, 1988.
3. See EC-Commission, One Market, One Money, 1990.
4. For more evidence on the growth effects of the EMS, see De Grauwe (1987).
5. There is a whole theoretical literature, starting with William Poole (1970), that has analyzed this problem.
6. This is the view taken by the drafters of the recent EC-report "One Market, One Money", 1990.

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